



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/571,266

03/09/2006

Yasushi Sasaki

060212

6102

23850 7590 02/17/2011
KRATZ, QUINTOS & HANSON, LLP
1420 K Street, N.W.
4th Floor
WASHINGTON, DC 20005

EXAMINER

CHAWLA, JYOTI

ART UNIT

PAPER NUMBER

1781

MAIL DATE

DELIVERY MODE

02/17/2011

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/571,266	Applicant(s) SASAKI ET AL.	
	Examiner JYOTI CHAWLA	Art Unit 1781	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/3/2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 7-16 is/are pending in the application.
- 4a) Of the above claim(s) 10-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 7-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicant's submission filed on 11/3/2010 has been entered as compliant. Claims 1, 7-16 are pending, claims 10-16 remain withdrawn for being directed to non-elected invention and elected claims 1, 7-9 are examined in the current application.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

A) Claims 1, 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikuine et al (JP 2000-166489 and translation), hereinafter Ikuine in view of the combination of Industrial gums by Whistler et al (page 205), hereinafter Whistler and Walter et al (US 5476678), herein after Walker.

Evidentiary reference "Particle Size Conversion" Standard sieve sizes obtained from: <http://www.sigmaaldrich.com/chemistry/stockroom-reagents/learning-center/technical-library/particle-size-conversion.html>

References and rejection are incorporated herein and as cited in the office action of 8/4/2010.

Response to Arguments

Applicant's arguments filed 11/3/2010 have been fully considered but are not persuasive

i) Applicants' remarks and affidavit regarding the process steps have been considered but have not been found persuasive. Applicant's main argument is that the product as taught by JP reference 2000-166489 A to Ikuine does not have similar loss on drying as instantly claimed. Applicants further provided evidence by way of a declaration by Mr. Katayama, which highlights the emulsifying ability and discoloration in gum arabic samples with average particle sizes of 1.5mm or less exhibit less discoloration and increased emulsification ability as compared to large particle size gum arabic wherein the gum arabic is heated to 125°C for 3,6 and 12 hours at reduced pressure (See Page 2 and pages 4-6 of declaration). However, claims 1, 7-9 recite a range of temperature from 90-180C, and the declaration shows evidence for a specific temperature value 125C. Further the rejected claims also do not recite any specific time period for the heat treatment, thus, Declaration of Mr. Katayama provides results of experiments that focus on one specific temperature and thus differ in scope from the invention as claimed and is therefore not persuasive.

ii) Regarding Tables 1-4 as presented as attachments to the Declaration, and applicants' remarks of pages 4-5 addressing the same have been considered. The tables 1-2 and table 4 highlight heating at 125C for different periods of time under reduced and normal pressure, which is only part of the claimed temperature range. Table 3 shows results of heating under reduced pressure at 90C for 0.5 hour and subsequently heating at 125C under normal pressure conditions, which differs in scope from the invention as claimed because the claims recite heating under reduced pressure. Claims 1 and 8, recite heating gum arabic particles having average size of 1.5 mm or less wherein the heating temperature ranges from 90-180C and heating is performed under reduced pressure, where discoloration is suppressed and emulsification ability is increased.

Art Unit: 1781

iii) Regarding applicant's remarks about data provided in the specification (Remarks, pages 4-6) and about reference JP 2000-166489 to Ikuine "fails to specifically disclose that gum arabic that is in the form of powder having a particle diameter of not more than 1.5 mm and has a loss-on-drying of not more than 3% by weight" (Remarks, page 8, paragraph 3 to Page 9, line 5). The arguments presented by the applicants' have been considered but are not persuasive. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In the instant case, applicant is referred to Ikuine translation, page 4, line 3 where Ikuine teaches of heating gum arabic in solid state, i.e., dried or undissolved state, wherein the gum arabic is heated at a temperature of 60°C to 140°C (for example, see translation, page 4, lines 10-14) and at reduced pressure in a gas, preferably inert gas to prevent discoloration (see translation, page 4, lines 23-24, page 7, lines 1-3). Ikuine discloses that "raw material gum arabic can be in the form of a commercially available powder, granules or other such gum arabic" (translation, page 5, paragraph 5, lines 13-18). Ikuine, however, is silent about the limitations of particle size and method of obtaining the powdered gum arabic including "an average particle diameter of not more than 1.5 mm." as disclosed in claim 1 and "spray dried" in claim 7. Whistler discloses that spray dried powder of various grades (sizes), including the spray dried, filtered, heat treated and purified gum arabic product was known and available (Page 205, last paragraph) at the time of the invention. Walter has been relied on to show the conventionality of spray dried gum arabic in where average particle size is below 0.177 mm, i.e., particle size in the claimed range (Walter, Column 5, lines 25-30). Thus, one of ordinary skill in the art at the time of the invention had knowledge of gum arabic powders that were spray dried and having average particle sizes overlapping the claimed gum arabic particles, as taught by Whistler and Walter. Therefore, it would have been well within the purview of one of ordinary skill in the art at the time of the invention to modify Ikuine and choose a fine spray dried powder of dried gum arabic in order to perform the heat treatment under reduced pressure. One of ordinary skill in the art

Art Unit: 1781

would have been motivated to choose a fine spray dried powder of gum arabic at least a for the purpose of modifying gum arabic powder in a size range which may be most readily usable in foods, such as confections with minimal further processing or pretreatment as taught by Walter (Column 2, lines 56-60).

Further, one of ordinary skill at the time of the invention also had the knowledge that heating gum arabic in inert gas under reduced pressure avoids discoloration and increases emulsification properties of gum arabic (Ikuine Page 4, last 10, lines and also pages 6-7, paragraph 7 of translation). Further more one of ordinary skill at the time of the invention also had the knowledge that discoloration occurs by heating gum arabic at temperatures above 140 °C and emulsifying ability does not show an increase when gum arabic is heated below 60 °C (Ikuine, Translation, page 6, Para 6, last 4 lines). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention that for a given starting material or raw gum arabic having particle size and moisture content, employing the heat treatment where the temperature range overlaps the claimed range and heating is performed under reduced pressure by the method taught by Ikuine will yield loss-on-drying of gum arabic and enhancement of emulsification ability that will be similar to loss-on-drying of gum arabic product as instantly claimed . Further, applicants are reminded that where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established. In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). "When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not." In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

iv) In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., caking as well as browning stated in remarks, page 9, lines 4-5, no specific

Art Unit: 1781

reduced pressure conditions and no specific time period for heating (as evidenced by declaration) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JYOTI CHAWLA whose telephone number is (571)272-8212. The examiner can normally be reached on 8:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Hendricks can be reached on (571) 272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1781

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JC/
Examiner
Art Unit 1781

/Keith D. Hendricks/
Supervisory Patent Examiner, Art Unit 1781